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FISHERY MARKET NEWS

AUGUST 1939

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UNITED STATES
DEPARTMENT OF THE INTERIOR
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FISHERY MARKET NEWS

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FISHERY MARKET NEWS

A REVIEW OF CONDITIONS AND TRENDS OF THE COMMERCIAL FISHERIES

August 1939 Washington, D. C. Vol. 1, No. 8

SUMMARY

Fresh Fish

New England.--June vessel landings 3 percent less in volume but 10 percent greater in value than a year ago. Prices for most species greater than in June 1938. Landings for first half of year 9 percent less in volume but 1 percent greater in value than in 1938.

Maine.--Catches of herring increase. Bounty on seals to become effective at the end of July.

Massachusetts.--Swordfish landings below those of a year ago. Groundfish prices show upward trend. A considerable number of tuna taken with harpoons.

New York.--White perch catch in Hudson River increases. Run of fluke in Great South Bay large.

New Jersey.--Catch of striped bass below expectations. Supply of most commercial species except bluefish relatively good in northern part of State. Hudson River shad catch equal to or greater than last year.

Maryland.--Striped bass and croakers abundant in Chesapeake Bay. Mechanical washer developed for cleaning crabs.

Virginia.--Catches of menhaden prove disappointing. Gill net catches in upper Potomac have been unusually large.

Georgia and South Carolina.--Soft crab catch small. Landings of shrimp steady but not heavy.

Mississippi.--Crabs scarce in the vicinity of Biloxi. Shrimp in good condition but low in price.

Great Lakes States.--Volume of catch in Lake Michigan below normal. Chicago wholesale receipts decline in June.

Pacific Coast States.--Early run of silver salmon appears off Washington and Oregon. Price of halibut slightly greater than in 1938. Scrap fish landings by halibut fleet decline.

Frozen Fish

Cold-storage holdings of frozen fishery products on July 15, 10 percent less than a year ago. Holdings in New England section show marked increase as compared with previous month. Freezings of fishery products for month ended July 15 slightly greater than in 1938. Canadian holdings on July 1 were 11 percent greater than a year ago.

Canned Fish

Alaska salmon pack 2,807,000 cases on July 29 as compared with 3,586,000 cases on the corresponding date in 1938. Major portion of decline due to reduced pack of red salmon. British Columbia salmon pack also less than a year ago. California tuna pack for first half of year 1,369,000 standard cases, an increase of 47 percent as compared with last year. Mackerel pack in California during first half of year 20 percent less than in 1938. Facilities for handling, storing, and canning tuna expanded in Washington and Oregon.

Byproducts

Marine-animal oil production in second quarter 5,600,000 pounds greater than last year due to increased production of herring and menhaden oil.

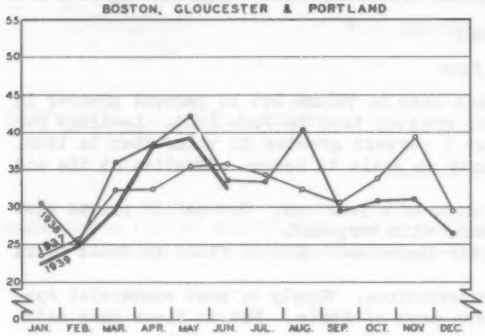
Foreign Trade

Imports of edible fishery products in June increased 18 percent in volume as compared with a year ago while exports increased 20 percent. During the first half of 1939 edible fishery imports and exports increased 20 percent and 28 percent respectively as compared with the same period in 1938.

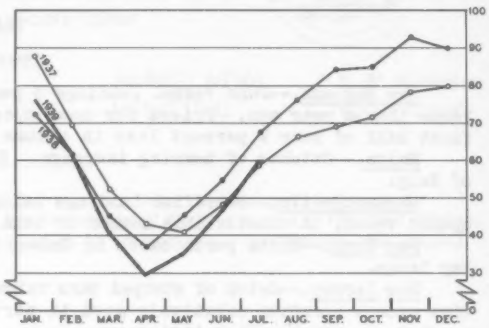
TRENDS OF FISHERY TRADE

In millions of pounds

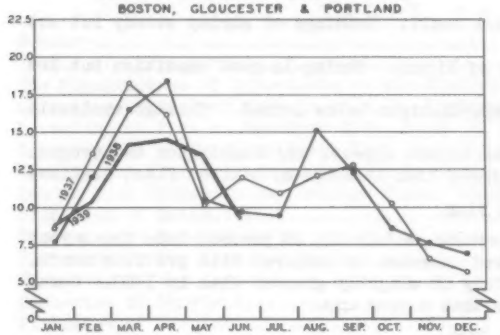
VESSEL LANDINGS, ALL FRESH FISH
BOSTON, GLOUCESTER & PORTLAND



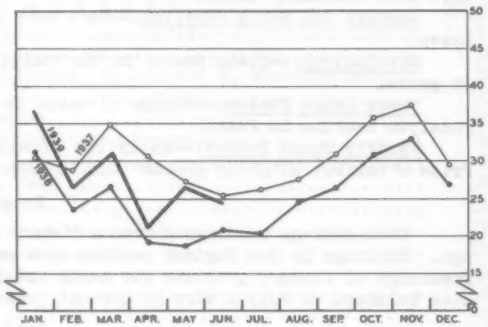
DOMESTIC COLD-STORAGE HOLDINGS OF FROZEN FISH



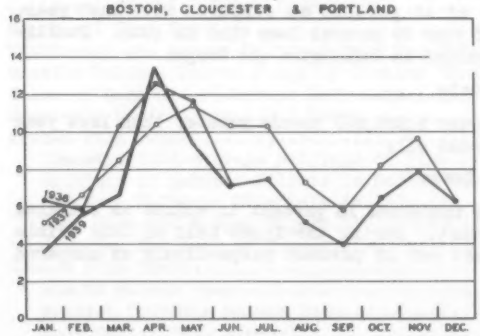
VESSEL LANDINGS, FRESH HADDOCK
BOSTON, GLOUCESTER & PORTLAND



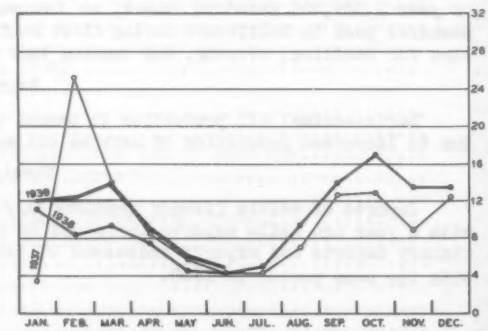
IMPORTS OF EDIBLE FISHERY COMMODITIES



VESSEL LANDINGS, FRESH COD
BOSTON, GLOUCESTER & PORTLAND



EXPORTS OF EDIBLE FISHERY COMMODITIES



THE SIGNIFICANCE OF BYPRODUCTS TO THE FISHERY INDUSTRY

By Richard T. Whiteleather
Associate Fisheries Statistical and Marketing Agent
Division of Fishery Industries

U. S. Bureau of Fisheries

Fish have been utilized for food purposes ever since the time man was first able to contrive a method of catching them. Today, however, through man's ingenuity and the necessity of developing new products in an effort to stimulate profits which have been drawn thin by present-day competition, we find that the fishing industry not only provides an important source of food for human consumption, but that a large portion of the industry has been diverted to the manufacture of commodities for industrial utilization.

Recent statistics have placed the total yield of the domestic fisheries at 4.3 billion pounds during 1937. Of this amount there was prepared for edible use about 1.8 billion pounds of fishery products, exclusive of waste lost in the preparation of these products for the market. During the corresponding period, the quantity of fishery products utilized in the processing of byproducts was nearly 2.1 billion pounds, which means that for every pound of fish entering the food market there was also more than a pound of fish or fish offal destined for industrial processing. Thus, there apparently remains as a distinct loss to our industry, through wastage and shrinkage, about 0.4 billion, or 400 million pounds of available raw material. Approximately half of this can be identified as waste from salmon packing plants, since it has been estimated 1/ that about 200 million pounds of cannery waste is discarded each year. Added to this poundage is a relatively large quantity of groundfish waste now thrown overboard at sea from vessels fishing on the offshore banks. The balance is comprised chiefly of shrimp and crab waste, even though some meal and scrap is already being manufactured from this source. Most of these losses will have to be salvaged, as new developments and methods are devised, before the economic utilization of our fisheries nears completion. At the present time manufactured fishery byproducts are valued at approximately 37 million dollars annually.

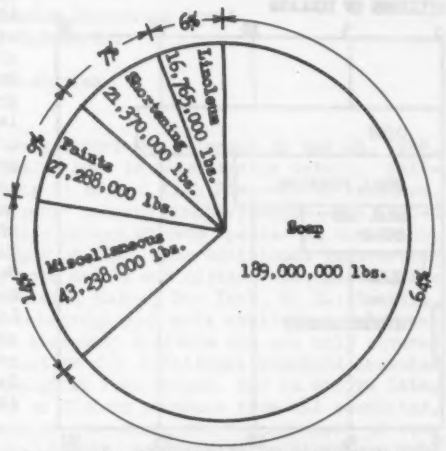


Fig. 1--DOMESTIC FACTORY CONSUMPTION OF MARINE ANIMAL OILS ACCORDING TO INDUSTRIES IN 1937. (Prepared from Bureau of the Census figures.)

Numerous varieties of fishery byproducts which in the course of the production processes have lost their identities as marine-animal derivatives are included in the daily purchases of the average person. Soap, paints, varnish, linoleum, and leather products all represent ordinary commodities that frequently employ marine-animal oil as ingredients in the finished product or in some stage of the processing. Poultry and stock feed is fortified by the addition of fish oils potent with vitamins A and D, while the better grades of liver oil find a ready market because of their human nutritional value. Large quantities of fish meal, usually a companion product in oil manufacturing, are used both as animal feed and fertilizer. Certain face creams and fine watch oils are examples of commonly used articles which are seldom thought of by the public as basically fishery products. Sperm whale oil, composed chiefly of waxes and not fats, has as a constituent a wax known as "spermaceti". This substance is a white, lustrous, crystalline solid that is consumed mainly by the domestic industry in the production of face creams.

1/ Vitamin Content of Oils from Cannery Trimmings of Salmon from the Columbia River and Puget Sound Regions. R. W. Harrison, A. W. Anderson, A. D. Holmes, and M. G. Pigott. Fisheries Investigational Report No. 36.

Porpoise and blackfish jaw oils have been employed as watch and chronometer lubricants and represent the most delicate and highly refined lubricants known. Correctly refined oil is of uniform quality, devoid of corrosive properties, absolutely gumless, able to withstand the coldest climates without congealing, and capable of maintaining its stability under high temperatures. The claim is made that there are not half a dozen men in the world who are experienced enough to separate these delicate oils into their proper commercial grades. Often the oil remains in tanks or casks as long as two years before the skillful eye of the refiner can determine to which class it belongs.

According to the latest statistics available, the value of the total production of all crude marine-animal oil and meal amounted to 24 million dollars in 1937. Marine- and fresh-water-shell products such as buttons, crushed poultry feed, and lime rank next in importance, with an aggregate value of 11 million dollars. Although the manufacture of these commodities represents by far the major share of the industry, many of the products of lesser importance are, nevertheless, interesting enough to be worth noting. One of these is pearl essence, which, as its name implies, is used in the commercial manufacture of imitation pearl and mother-of-pearl. The silvery substance, guanin, rubbed off the scales of certain species of fish, freed from foreign material, and suspended in a suitable liquid is commercial pearl essence. It appears that the process was first discovered by a Frenchman in 1656 and that the industry for a great number of years remained confined to the European continent; however, during the World War the supply to this country was cut off and attention was directed to the possibility of a domestic production. Many of the fishes in the American waters were found to yield a satisfactory product, and from a meagre beginning a relatively large industry has ensued. Improved machine methods of manufacture and wider application of this product have increased the demand to the point where the industry is today consuming more than 2 million pounds of fish scales yearly. The principal sources of American pearl essence are the Maine herring fishery and the Chesapeake Bay alewife fisheries. Several remaining potential sources of this product are the California pilchard, Alaska herring, Great Lakes whitefish, and southern mullet fisheries. In addition to imitation pearls, imitation mother-of-pearl celluloid plastic mirror backs, manicure sets, fancy cane handles, knife handles, etc., are coming into prominence as desirable pearl essence articles.

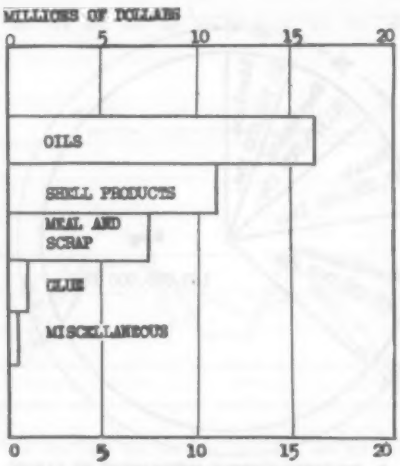


Fig. II--VALUE OF DOMESTIC PRODUCTION OF BYPRODUCTS

Liquid glue presents another illustration of the utilization of fish waste to commercial advantage. During 1937 a production of 442,000 gallons of glue valued at $908,000 to the primary producer was indicated by official statistics. Most glues of marine origin are made from salt-free groundfish (cod, haddock, hake, pollock, and cusk) offal consisting chiefly of heads, bones, skins, and trimmings. Other species of fish are used, but the yield and the quality of the finished product is below that manufactured from groundfish. Fish glue is sold usually in liquid form, and is one of the most satisfactory liquid adhesives marketed today, in that it is ready for immediate use as received by the purchaser, no heating or special preparation being necessary before using. Preference is shown fish glues over those of animal origin for all purposes requiring a true flexible adhesive. For this reason, fish glue is employed extensively by bookbinders, photoengravers, and manufacturers of mucilage, court plaster, labels, and stamps.

A most unique product of the fisheries is isinglass. In the manufacture of this article the swim bladders of various species of fish are used exclusively. The inner layer of the swim bladder or sound of many fish, chiefly carp, sturgeon, and catfish, consists of pure isinglass and when properly prepared is marketed as a clarifying agent for wines, ciders, and malt liquors. Isinglass obtained from the outer layer of the sound is inferior in quality, but nevertheless is salable as an ingredient in glass and pottery cements and as a size for textiles. Statistics regarding the production of this commodity are very limited, but

it is known that a few plants along the Atlantic Coast are engaged in this operation.

The foregoing is not intended by the writer to be a complete discussion of all fishery byproducts, but only an attempt to point out the significance of this phase of the industry and to briefly enumerate a few of the more ingenious methods employed in the utilization of fishery products, which for the most part are classed as inedible yet have become salient factors in the welfare of our population. Although great strides have been made in promoting economical use of our fishery resources, there still remains as previously mentioned a quantity approaching half a billion pounds of unused waste which is a potential source of profit for the alert operator. Progressive private enterprise is attacking these problems with the aid of the Bureau of Fisheries, which maintains laboratories manned by skilled technologists in several of our important fishing areas, with the express purpose of inquiring into ways and means of assisting the industry toward more profitable and economical utilization of our marine resources.

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MARKETING OF FISH AT BOSTON

By B. E. Lindgren, Senior Fisheries Marketing Agent
Division of Fishery Industries

U. S. Bureau of Fisheries

The first issue of the Boston Fishery Market News Report was released on May 26, 1938. It covers the daily activities of this important fishing port in considerable detail. Hailing fares of the offshore and inshore fleets landing at Boston Fish Pier--otter trawlers, draggers, line trawlers, hand liners, gill netters, purse seiners, and harpooners--are listed in one large table, which also includes the first sales prices of each species in the catch. To aid in the orderly marketing of Boston's huge supply of fish, much additional information is included. The current landings at other ports, both nearby and distant--Gloucester, New Bedford, and Provincetown, Mass.; Portland and Rockland, Maine; New York, N. Y.; Seattle, Wash.; and Prince Rupert, B. C.--are received by telegraph and made available early each morning. Rail freight, rail express, and coastwise steamship arrivals are not only covered for the period since the preceding report, but a section for additional receipts includes shipments by rail and steamship, mostly fish and shellfish from Canada, due to arrive later in the day. Other daily compilations include imports of fishery products from all countries, sales prices of fishery products shipped to dealers on the Pier, and the movement of over 30 fishery commodities into and out of cold storage. Weekly, comparative holdings are published for the current and preceding weeks, and for four weeks and a year previous. In order to be of the greatest aid to the industry, the daily report is completed and delivered to the dealers on and in the vicinity of the Pier each forenoon, and, for delivery outside Boston, is placed in the mail at noon.

Boston is primarily a production center, supplying enormous quantities of fresh and frozen fishery products to the nation. It is well situated with the natural advantages of an excellent harbor and nearness to both producing and marketing areas. It also has good handling and shipping facilities.

The Boston Fish Pier, the largest in the world devoted exclusively to the fish business, is the outgrowth of the importance of the fishing industry to Boston. The Pier itself extends 1,200 feet into the harbor and is 300 feet in width, the entire property comprising 537,000 square feet. It was built at a cost of $3,000,000 and was opened on March 30, 1914. Approximately 350,000,000 pounds of fish are landed at the Pier annually.

The Pier is divided by a wide center street flanked on each side by buildings especially designed and constructed to house the activities of the wholesale dealers occupying the individual stores. Besides sufficient space for the receiving, processing, packing, and shipping of fish, they also contain offices and storage rooms. Each store has a front entrance on the center street and a rear entrance on a mooring side of the Pier, thus making it possible for fish to be taken directly from the vessel into the rear entrance, processed, packed, and delivered to a waiting truck at the front entrance.

A large cold-storage plant is located at the shore end of the Pier. It has a capacity of 15,000,000 pounds of frozen fish as well as adequate freezing and icing facilities. In addition, there are three other public cold-storage plants near at hand that freeze and store fish.

The New England Fish Exchange is located in a building on the outermost end of the Pier. It is here that all trips of fish are sold. The Exchange is open early each morning, except on Sundays or holidays. If desiring to sell in or over the Exchange, the captain of each vessel is required to register his catch with an officer of the Exchange before it can be auctioned. The detailed fare of each individual trip is posted on blackboards for the inspection of the buyers. All bidders or buyers must be members of the Exchange. Every effort is made by the vessel captains to make port prior to the opening of the Exchange in order to obtain top prices.

The bidding commences at 7:15 a.m. Each captain has the alternative of making his own sale or engaging an authorized agent to do his selling for him. The auctioneers are on a raised stand in the center of the Exchange around which the buyers gather. The auctioneer announces the amount and kind of fish he has to offer, accepts bids, and sells to the highest bidder. The buyer may buy part or all of any trip. All purchasers are presented with settlement slips which must be paid before the closing of that day's business. The sales continue throughout the day until all fish are sold. Each morning the sales begin with new arrivals since fish seldom are carried over unless the owner or captain finds it advantageous to do so.

The Boston Fish Pier is a scene of great activity throughout the day. Fish is being moved in all directions as soon as the first sales are consummated. From the vessel's side to the dealer's premises the fish generally are transported in large two-wheeled carts, hauled by hand or motor trucks.

Good transportation facilities add to the importance of Boston as a producing center. On the Pier a railroad spur on each side of the cold-storage plant makes it possible to load directly into cars or unload directly into the freezer. Two large trucking firms have platforms to receive and send shipments. All of the stores have loading platforms to accommodate trucks of various sizes. The finished products are loaded at these points for local or State-wide distribution. In addition, large refrigerated trucks receive cargoes for distant delivery. These trucking lines maintain daily schedules and extend as far west as Denver. A fleet of trucks carries express shipments from the Pier to rail terminals. Much of the fish shipped to New York is transported in car lots on special freight trains operating on a fast schedule.

There are about 90 wholesale fish establishments and manufacturers of fishery products in Boston. They handle fresh and frozen fish and shellfish, and produce fillets, salted, smoked and canned fish, crab and lobster meat, cod-liver oil, glue, fish meal, and fish oil. In addition, there are a number of commission merchants who handle shipments of fish and shellfish to the Boston market.

Boston is not only an important producing center, but it also offers a market for fish from other sections of the country. Receipts of salmon and halibut from the Pacific Coast; frozen swordfish from Japan; frozen shrimp from the Gulf; fresh-water fish from the Great Lakes and inland States; and large quantities of lobsters, other shellfish, and fish from the Maritime Provinces of Canada and from Newfoundland add to the supply of native varieties.

The importance of Boston as a fishing port is emphasized by the amount of fish landed during the last seven months in 1938, the period during which the Market News office operated. Landings totaled 174,569,000 pounds valued at $4,249,000 during this period. Haddock accounted for 67,565,000 pounds, valued at $1,596,000, or 39 percent of the total receipts and 38 percent of the total value. Cod followed with 40,173,000 pounds, valued at $873,000. This represents 23 percent of the landings and 21 percent of the value. Rosefish (redfish) came next in poundage with 18,132,000 pounds, valued at $222,000, forming 10 percent of the catch and 5 percent of the value. Mackerel, with 11,545,000 pounds, valued at $386,000, made up 7 percent of the receipts and 9 percent of the value. Species landed in lesser quantities included, in the order of their importance, pollock, flounders (blackbacks, dabs, gray sole, lemon sole, and yellowtails), whiting, hake, cusk, swordfish, halibut, and wolffish (catfish).

The above totals do not include the fish landed and sold to dealers across the harbor on Atlantic Avenue; the quantity landed by undertonnage boats; imports; nor the receipts of fish and shellfish by truck, rail express, rail freight, and coastwise vessels.

Early in 1939 the Boston office began to release a monthly summary of the receipts and prices of a number of the more important species landed at the Fish Pier and sold through the New England Fish Exchange. The summary is a daily compilation of the quantities landed, the first sales prices, and the average prices. A series of comparative figures for the current month, the preceding month, and the preceding year also are included.

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MARKETING OF FISH AT NEW YORK CITY

By W. H. Dumont, Senior Fisheries Marketing Agent
Division of Fishery Industries

U. S. Bureau of Fisheries

The New York office of the Fishery Market News Service issued its first Fishery Products Report on February 14, 1938. Reports have been released daily since then with the exception of Sundays and holidays.

The first section of each daily report includes data on the number of cars and packages of fish and shellfish which have arrived in the metropolitan area by rail freight and express during the preceding 24 hours, or, in the case of intervening Sundays or holidays, the period since the latest report. In the instance of fish, the species rarely can be indicated since it seldom is noted on the bill of lading. For shellfish, however, the species generally is shown. Following the above section of the report, arrivals by coastwise vessels are reported. Imports of fresh and frozen fish and fishery byproducts, such as fish oils, fish meals, etc., are compiled daily from the ships manifests filed at the local Custom House and information concerning the commodity, number of packages, country from which shipped, and the name of the vessel are shown in the daily report.

Direct landings by fishing vessels at the New York Market are reported as "hailing fares". Since hailing fares often vary from the actual landings, the exact "weigh-outs" are included in the report for the following day. With the advent of the Fishery Market News Report an accurate record of landings by species at New York City has been made available for the first time.

Landings by fishing craft at Portland and Rockland, Maine; and at Boston, Gloucester, Provincetown, and New Bedford, Massachusetts, are tabulated and included in the report. The number of craft, type of gear used, and the price of each species landed also are shown. Sections on Pacific Coast markets include the transactions on the halibut and salmon exchanges in Seattle, Washington; halibut landings at Prince Rupert, B. C.; and the number of cars of fresh or frozen fish shipped east from each of these ports. Such information relating to market conditions at other fishing ports is received in New York by telegraph early each morning.

The amount of fish and shellfish entering or withdrawn from cold-storage plants in the Greater New York area is compiled and shown daily in about 60 classifications. Once a week the current holdings are compared with the holdings of the preceding week and also with the holdings for four weeks and a year previous. Ten cold-storage firms with fourteen plants have cooperated with the Bureau in furnishing these data. Of these plants only two actually freeze fish or shellfish while the rest are merely storage plants and receive their goods already frozen.

As the Salt-water Market is separate from the Fresh-water Market, the prices for the two are included in different sections of the report. Managers and salesmen of the various firms are interviewed daily to obtain the day's wholesale price quotations for the various kinds of fish and shellfish. Prices usually are accompanied by essential qualifying des-

criptions of the commodity, such as size and quality of the product, locality of capture, gear used, and size and type of package.

At the same time that quotations are being gathered in the Salt-water Market, a record of the receipts of each firm is obtained. These are compiled and on the following day these records furnish the basis for the section of the report showing the total quantity of each species received by States and Canadian Provinces. The record of the receipts of each firm also shows the method of transportation into the market area. In 1939 a monthly summary making use of this information will be issued for the Salt-water Market. This summary will classify receipts by origin and by method of transportation such as truck, express, rail freight, coastwise vessel, and fishing craft.

For the six months from the first of March through August,1938, the Salt-water Market received 79,680,000 pounds of fish, excluding imports and receipts of filleters and some hotel supply houses. Receipts of shellfish, 22 species in all, are not included in the above figure. The largest poundage arrived by motor truck, accounting for 40 percent of the total. Fishing craft landings were next with 27 percent. Rail freight and rail express followed with 23 percent and 9 percent, respectively. Coastwise vessels carried only one-half of one percent of the total. Seventy-six different species of fish were received.

Twenty-two species accounted for 74,564,000 pounds, or 94 percent of all salt-water fish received. Over two million pounds of each of the eleven leading varieties were received, forming 79 percent of the total. In order of their importance, they were cod, flounders (blackbacks or winter flounders), mackerel, haddock, butterfish, scup (porgy), yellowtails (dabs), whiting, halibut, shad, and croaker. Receipts of six species ranged from one to two million pounds, or 10 percent of the total. They were gray sea trout (weakfish), fluke (summer flounder), bluefish, gray sole, sea bass, and salmon (western). The five species received in amounts from one-half million to one million pounds were sea herring (including sardines), hake, striped bass, pollock, and tilefish.

Groundfish--cod, haddock, hake, and pollock--accounted for 26 percent of the total receipts during the 6-month period. Flatfishes from the East Coast--blackbacks, flounders, fluke (summer flounder), gray sole, and yellowtails--formed 21 percent, and western halibut and salmon a little over 5 percent. Varieties caught in large quantities in the Middle Atlantic States, such as butterfish, mackerel, scup (porgy), gray sea trout, sardines, and whiting, made up 10 percent. Of the remaining species, those fish taken in large amounts in other areas as well as in the Middle Atlantic--bluefish, croaker, sea bass, shad, and striped bass--represent 31 percent of the receipts.

The three leading varieties of shellfish received during these six months were shrimp with 5,343,000 pounds, lobsters with 2,150,000 pounds, and squid with 1,671,000 pounds.

Since detailed receipts for the Fresh-water Market were not collected, exact quantities cannot be given. However, from daily experience in the Market it can be stated that whitefish and yellow pike were the leading species among the higher-priced fish while carp was important in the lower-priced group.

The distribution of fresh and frozen fish and shellfish in the New York area was effected largely through 92 wholesale dealers, 20 hotel and restaurant supply firms, and 7 brokers. Of the wholesale dealers, 24 handled fresh-water fish exclusively, 3 sold fresh-water and salt-water fish, while the remainder were mainly either salt-water fish or shellfish firms. There were 12 fillet-cutting firms in addition to several of the hotel supply firms that produced their own fillets.

The delivery of fish and shellfish to local or suburban purchasers generally is made by trucks owned by the buyers. Trucking agencies and rail express carry the balance.

The retail outlets for fish in New York City have been estimated by the City Bureau of Markets to include 1,500 independent stores that handle fish exclusively, 1,800 meat stores selling fish part of the time, and 700 general markets and chain stores which handle fish.

The wholesale dealers handling fresh and frozen fishery products in New York are centered in a marketing area comprising about four square blocks along the East River near the foot of Fulton Street and just south of the Manhattan end of the Brooklyn Bridge. Known as

Fulton Market, the wholesale fish trade has been in this location over a century. Dealers handling salt-water fish and shellfish occupy the greater part of the area, the fresh-water fish dealers practically being limited to one street known as Peck Slip. As there are no direct rail or express connections, all shipments must be trucked between the market and the terminals. Many of the latter are situated at a considerable distance and across the city. Two freezers adjoin the market area while the remaining plants storing frozen fish are widely scattered. Fishing vessels discharge their fares at one of several piers extending into the East River. The catch usually is barreled or boxed on the pier for trucking to the dealer's stand or for immediate shipment.

On the site of a market building which collapsed into the East River in 1936 a modern structure has been erected by the city and leased to an organization of the wholesale dealers. It contains well-designed stands on the ground floor with ample office space and dressing rooms above and is supplemented by a large parking area in front and a receiving platform and bulkhead dock in the rear. Providing many advantages over the older types, the new market building was opened in June 1939. At present the Fishery Market News Service office is located in a building on the edge of the market area. It is hoped, however, that quarters may be secured in the new market building.

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IMPROVEMENTS IN HANDLING FRESH FISH BECOMING OF INCREASING IMPORTANCE

In response to requests from members of the industry, four technologists from the Bureau's technological laboratories located at College Park, Maryland, were detailed to the Boston Fish Pier for several months for the purpose of studying existing methods of handling fresh fish on the Pier and on board trawlers to determine what improvements can be made. These men already have reported to Boston and are at present engaged in preparations for this work. These tests will include chemical engineering and bacteriological tests of sanitary conditions on the trawlers and on the Pier and further development and application of the Stansby-Lemon electrometric test for the relative freshness of fish. This test will be extended to as many species of fish as possible. Our technologists also will study the possibilities of developing better methods of candling redfish to eliminate those fish which are unfit for food. It is hoped that as a result of these studies our technologists will be able to recommend certain improvements in handling which will improve quality and eliminate many seizures of fish due to poor quality.

NEW ENGLAND VESSEL LANDINGS DECLINE IN JUNE

Landings of fishery products at the ports of Boston and Gloucester, Mass., and Portland, Maine, by fishing vessels during June totaled 32,630,000 pounds, valued at $695,000. This is a decrease of 3 percent in quantity but an increase of 10 percent in value as compared with the same month last year. The principal items landed during the month were rosefish 10,259,000 pounds, haddock 9,319,000 pounds, and cod 7,007,000 pounds. Landings at Boston accounted for 67 percent of the landings at the three ports during June, those at Gloucester 28 percent, and the landings at Portland 5 percent.

Fishermen received an average of 2.13 cents per pound for the fish landed during June as compared with an average of 1.89 cents during the previous month, and of 1.88 cents during June 1938. Prices for all important species except lemon sole, yellowtail, blackbacks, dabs, and whiting were greater than a year ago.

Landings of mackerel continued light during June, amounting to but 1,182,000 pounds as compared with 3,604,000 pounds in the same month last year, and an average of nearly 5,000,000 pounds for June during the previous 10 years. Fishermen received an average of 3.78 cents per pound for mackerel landed at the three ports during June as compared with an average of 2.40 cents the same month in 1938.

Rosefish landings by fishing vessels at the three ports in June, amounting to 10,259,000 pounds, were the largest for any single month in the history of the fishery. Landings at

Gloucester totaled 7,293,000 pounds and accounted for 81 percent of the landings at that port during the month. Rosefish was also the principal species landed at Portland during June. The receipts of rosefish at this port totaled 904,000 pounds or 52 percent of the total vessel landings during the month.

Landings at the three ports during the first half of 1939 totaled 186,460,000 pounds, valued at $4,545,000, as compared with 205,837,000 pounds, valued at $4,495,000, during the same period last year. It will be noted that although the volume of the landings was 9 percent less than those for the first 6 months of 1938, the value increased 1 percent. The landings of all important items except flounders, swordfish, and rosefish were smaller than for the first half of 1938.

Receipts of rosefish at the three ports during the first six months of 1939 amounted to 36,288,000 pounds as compared with an average of 23,300,000 pounds during the same period the previous three years.

BOSTON FISH PRICES IN MAY AVERAGE HIGHER THAN A YEAR AGO

The average price paid for fishing vessel fares sold over the New England Fish Exchange on the Boston Fish Pier during May 1939 was 15 percent higher than for the same period a year ago. However, the May price was 14 percent lower than for April, according to the monthly summary issued by the Boston Fishery Market News office. The average price paid for 27,761,000 pounds of fish landed at the Pier during May was $2.05 per hundred pounds. A year ago landings were over two million pounds greater but the average price was less by 27 cents per hundred pounds, or slightly over one-fourth cent per pound.

Although May landings of scrod haddock, by offshore vessels, were 3,810,000 pounds, more than double those of a year ago, the average price increased 15 cents per hundred pounds. Like other important groundfish, however, prices averaged lower than in April.

Large and market cod, taken by offshore vessels, averaged $1.74 and $1.69 per hundred pounds, respectively, in May. These prices were above those for the corresponding month in 1938 but only 56 percent of April's averages. The May average price of offshore haddock at $2.14 per hundred pounds, was under both April 1939 and May 1938 when this species brought $2.50 and $2.23 per hundred pounds, respectively. Mackerel were landed on 13 days in May but totaled only a million and a half pounds--64 percent under last year. At $3.08 per hundred pounds, however, prices averaged more than a cent per pound higher.

Rosefish landings by offshore vessels in May were slightly above those in April but only one-fourth of the total a year ago. The May average price at $1.36 per hundred pounds was approximately one-fifth cent per pound above the average price for the corresponding month in 1938 but almost one-half cent per pound under the previous month. Rosefish landings by inshore craft more than tripled those in May a year ago and more than doubled those in April 1939. Average prices declined from $1.90 per hundred pounds in April to $1.10 in May. The latter was approximately one-fifth cent per pound under the average price in the same month in 1938. Combined landings of rosefish by offshore vessels and inshore craft in May this year were 1,891,000 pounds as compared with 3,055,000 pounds a year ago.

FISHERIES OF MAINE

Sea herring.--Herring were more abundant in June than in the preceding month. Seiners and weir men reported normal catches in Eastern Maine but as the supply was not excessive the price held at approximately 70 cents per bushel.

Seals.--According to the State of Maine's Department of Sea and Shore Fisheries, seals are one of the greatest menaces to the lobster industry. The stomach contents of several dozen seals examined revealed that lobsters are the common food of these mammals. The Department is attempting to find ways of utilizing the bodies on a commercial basis since it is expected that many seals will be slaughtered when the State-wide (with the exception of York County) bounty goes into effect at the end of July.

FISHERIES OF MASSACHUSETTS

Bluebacks.--Fishermen conducting their activities in the Merrimac River report that the blueback season has begun. This run usually continues through September. Prices are quoted at about $5 per barrel on the Boston markets.

Eels.--Massachusetts fishermen operating eel pots are obtaining 7 cents per pound for eels, which is comparable with the price at this period last year. Better prices are anticipated later in the year.

Groundfish.--Prices have shown an upward trend during the past month as compared with the previous month.

Shad.--Few shad were taken in the Merrimac River during last month. Most fish have been small.

Swordfish.--Landings of the swordfish fleet are understood to have been below those of last season. Prices are ranging from 30 to 36 cents per pound for large fish and 18 to 20 cents for small fish.

General.--Harpoon boats have been delivering a considerable number of tuna; however, smaller quantities of this fish have been received from seiners. Additional vessels are preparing for seining operations, according to Massachusetts reports. Whiting, which are arriving in quantity at most of the principal ports of this State from the trap and pound-net fisheries, are commanding from ½ cent to 1½ cents per pound. The clam market is claimed to be steady at $4 a barrel to the digger. Lobstermen who heretofore have caught their own bait are finding it more profitable to buy it. The time formerly spent in catching bait is used advantageously to build more traps and to fish those in the water. Because of the demand from this source, Gloucester prices for fillet cutting waste used as bait have enjoyed a continuous increase. Two years ago rosefish waste could be purchased for 35 cents per barrel; at present it is selling for about 75 cents.

FISHERIES OF NEW YORK

White perch.--Catches on the Hudson River increased this year. It is said that the quantity taken has been double that of recent years. Prices to the fishermen were considered satisfactory despite the heavy production.

General.--Fishermen maintain that this year's fluke run in Great South Bay has been the largest that can be recalled. Porgies, weakfish, and mackerel were also plentiful, resulting in practically a no-demand market during the first part of July.

FISHERIES OF NEW JERSEY

According to the Bureau's New Jersey agent, it appears that the supply and abundance of most commercially important species of fish taken in the northern part of the State are at the present time relatively good, with the exception of the bluefish. Thus far this season bluefish catches have been very light. Sea trout, especially in the vicinity of Sandy Hook Bay, have not yet arrived in any quantity. Market prices have been below normal for practically all species.

Shad.--On the Hudson River during the past season catches have equalled if not slightly exceeded the previous season. Fishermen claim that roe fish (females) were predominant in the 1939 catches, with the average individual weight of the fish somewhat less than during the 1938 season. Netters might have been even more successful if fishing operations had not been hampered by large quantities of floating debris and an abnormally large accumulation of silt and dirt in the water. Sandy Hook Bay shad averaged 11 cents per pound for roes and 6 cents for bucks as compared with 20 cents and 8 cents in 1938.

Striped bass.--The commercial yield of this species which was expected to be heavy in 1939 apparently did not fulfill predictions. It is believed that 1939 catches will show a considerable decrease as compared with those of 1938.

Hard clams.--The supply of hard clams in northern New Jersey was apparently adequate but the market demand was light.

FISHERIES OF MARYLAND

Striped bass and croaker.--It is understood from reports of the Bureau's agent in Maryland that striped bass and croaker have been abundant in Chesapeake Bay during this season.

Hard crabs.--Hard crabs were plentiful early in the season. The price opened at about $3 per barrel but at this time has declined to an average of about half this figure.

A device for washing hard crabs before picking the meat has appeared in 1 or 2 crab plants in Talbot County. This consists of a water pipe line with sprinkler attachments. Workers are required to wash the crabs with the use of this device before picking the meat, thus removing portions of the viscera and other particles ordinarily discarded. Other undesirable matter adhering to the crabs as they come from the cooker is also removed. A certain amount of time is required for the washing, but it is thought that this is regained since the picking process is facilitated by the washing.

FISHERIES OF VIRGINIA

Menhaden.--Ten menhaden plants are again operating on Chesapeake Bay this year. The month of June and the first two weeks of July proved disappointing to these operators, with the total catch at that date even below the 1938 catch which was considered low.

Sea trout.--With the expiration of the trout season it is said that this species was normally abundant in Chesapeake Bay throughout that period but that prices remained low with the exception of the last two weeks of the season. After most of the pound nets had been taken up a run of trout appeared which brought 4 to 6 cents per pound in contrast to the prices of ½ cent per pound for pan trout and 3 cents per pound for medium trout which had prevailed earlier. Operators with traps fishing or with trout in pounds during the last week in June and the first week in July were fortunate.

Soft crabs.--By this time the market has absorbed the spring glut of soft crabs and has apparently settled to normal summer volumes and prices. Weather conditions have been favorable to both soft crab shedding and shipping.

General.--Gill netters on the upper Potomac River report the best catches of any season for ten years. The carp seine operators also made excellent hauls.

FISHERIES OF GEORGIA AND SOUTH CAROLINA

Soft crabs.--Catches this year practically ceased in May, and to date the season has been a virtual failure. Ordinarily the best months of production are from April to November.

Shrimp.--Since the shrimp season by now has passed its peak in these States, it is anticipated that the fleet will be returning to Florida waters presently. Only 2 Florida companies operated fleets out of Thunderbolt, Ga., with the main shrimping activities occurring in South Carolina. Catches have been steady but not heavy.

FISHERIES OF MISSISSIPPI

Crabs.--Reports from the Bureau's agent indicate that crabs have been unusually scarce in the Biloxi area during the present year. This lack of abundance has not been so pronounced in the Pascagoula and Bay St. Louis sections of the State.

Shrimp.--Although the shrimp season remained closed during July in Mississippi waters, relatively good catches were made in the Gulf of Mexico outside the territorial waters. The prevailing price continued to be low during that month. Fishermen averaged about $7.50 per barrel. One operator claims a pack of 4 cases per barrel of raw shrimp whereas the former ratio amounted to about 3½ cases to a barrel. This increase is partially attributed to the better-than-usual condition of the shrimp during this season.

FISHERIES OF THE GREAT LAKES

Although catches in Lake Michigan during the month of June and the first half of July are usually expected to be the smallest of the year, those made the past season have been definitely below normal. Chubs that ordinarily begin to appear at this time have not been taken in any considerable quantities. Trout and chub fishermen are understood to have hung their nets on the racks for the time being.

Market demand for frozen oysters is increasing in the Middle West, according to 1938-39 figures.

CHICAGO FISHERY RECEIPTS DECREASE

Chicago Wholesale Fish Market receipts during June were 3,632,000 pounds, 22 percent below the receipts for May. This decline is attributable largely to lesser quantities of halibut, shrimp, yellow perch, and lake trout being received than in the previous month. During June, 64 classifications of sea foods were received from 21 States, Alaska, and 5 Provinces of Canada. The leading State in shipments was Michigan with 622,000 pounds, made up largely of lake trout. Next was Louisiana with 603,000 pounds, practically all of which was shrimp. The largest amount of any one classification of sea food received during June was 779,000 pounds of shrimp, 77 percent of which originated in Louisiana. The remaining shipments of shrimp came from Texas. The Bureau's figures show that 33 percent of these sea foods was transported to Chicago by truck, 40 percent by express, and 27 percent by freight.

CALIFORNIA TRAWLER CATCH INCREASES

According to a tabulation prepared by the California State Fisheries Laboratory, the trawler catch in California during May 1939 amounted to 1,105,546 pounds as compared with 662,737 pounds during the same month of 1938. The catch of round nosed sole during May 1939 contributed 44 percent to the catch during the month. Pointed nosed sole followed with 23 percent and rockfish with 10 percent. Other species, the catch of which exceeded 20,000 pounds each, were rex sole, sand dabs, crabs, northern halibut, starry flounders, and Pacific cultus.

Trawlers made 585 drags during the month and their total dragging time amounted to 1,269 hours as compared with 423 drags during the same month of 1938 and total elapsed dragging time of 914 hours. The average catch per drag during May 1939 amounted to 1,890 pounds and the average catch per hour, 871 pounds. During May 1938 the average catch per drag was 1,567 pounds and the average catch per hour 725 pounds.

NORTHWEST TUNA SCOUTED

Although few albacore tuna were landed at Astoria, Oregon, before the first of August in 1938, several vessels have already made scouting trips in the hope that the run might be located earlier this year. Most of these trips were of no avail even though the vessels covered extensive areas ranging as far seaward as the edge of the Japanese current which is nearly 200 miles off shore. During the latter part of July one vessel sighted the first albacore of the 1939 season some 60 miles west of Tillamook Head. The latest reports at this writing state that small quantities of albacore have been landed a few days prior to August 1. This is encouraging news to the young tuna packing industry at Astoria which has

recently expanded its icing facilities, packing plants, and unloading gear. Facilities for landing tuna have also been provided at various other points along the Washington and Oregon Coasts.

WASHINGTON AND OREGON SILVER SALMON RUN EARLY

The silver or coho salmon, usually not taken in commercial quantities until the latter part of the summer, appeared during June of this season. Trollers fishing off the Oregon and Washington Coasts were surprised to run through large schools of silver salmon while fishing for chinooks. It was reported that many of the trollers caught more silvers than chinooks, which is unusual at this period of the season. During June the troll fleet landed 170,000 pounds of silver salmon at Seattle as compared with 68,500 pounds for the same month a year ago. This represents an increase of 148 percent.

This same condition appeared to obtain in British Columbia as unusually large catches have been reported taken in this section.

SEATTLE HALIBUT PRICES SLIGHTLY GREATER THAN IN 1938

During the first three months of the 1939 Pacific Coast halibut season (April, May, and June) vessels in the halibut fleet delivering their catch to Seattle landed 10,351,000 pounds of halibut for which they received an average of 7.46 cents per pound. In the same period last year landings at Seattle amounted to 9,733,000 pounds which sold for an average of 7.25 cents per pound. Seattle halibut landings during June of this year amounted to 3,855,000 pounds, valued at $284,000, as compared with 3,668,000 pounds, valued at $262,000, in the same month last year.

Landings of scrap fish, consisting of sablefish, "lingcod", and rockfishes, at Seattle by vessels in the halibut fleet during the first six months of 1939 were less than half as large as those for the same period last year. Landings of sablefish during the first half of the current year amounted to 117,000 pounds, a decrease of 60 percent; those of "lingcod" 395,000 pounds, a decrease of 61 percent: while landings of rockfishes totaled 108,000 pounds, a decrease of 62 percent.

VALUE OF CANADA'S FISHERIES INCREASES

The marketed value of the production of Canada's fisheries industries during 1938 amounted to $40,548,000, according to a compilation prepared from advance reports of the fisheries of Canada released by the Dominion Bureau of Statistics at Ottawa. This is the greatest value since 1930 when it amounted to $47,804,000. The outstanding increase occurred in British Columbia, the marketed production of which was nearly half that of the entire Dominion, amounting to $18,726,000. The increase in British Columbia over the preceding year was nearly $2,600,000, which was accounted for primarily by an increased valuation in the products of the salmon industry. Following British Columbia, in order of the value of marketed fishery commodities, was Nova Scotia, whose marketed fishery products aggregated $8,804,000; New Brunswick, $3,996,000; Ontario, $3,354,000; Quebec, $1,954,000; and Manitoba, $1,811,000. The valuation of marketed fishery commodities in each of the other provinces was less than one million dollars.

QUARTERLY MARINE-ANIMAL OIL TRADE

Data collected by the Bureau of Fisheries and released by the Bureau of the Census show that there was a large increase in the production of domestic fish oils during the second quarter of the current year as compared with the production for the same period last year. Increases in the production of menhaden oil on the East Coast and of herring oil in Alaska accounted for the major portion of the increased yield.

There is listed below information contained in Bureau of the Census report, dated July 29, 1939, on the production, consumption, and imports of marine-animal oils during the second quarter of 1939 and on the warehouse stocks held at the end of the quarter.

Production, Consumption, and Stocks of Marine-animal Oils

Oil		Factory operation for the quarter ending June 30		Factory and warehouse stocks, June 30
		Production	Consumption	
1939		Pounds	Pounds	Pounds
Cod and cod-liver oils		325,521	5,205,713	23,404,073
Other fish oils	1/	8,155,358	43,542,896	83,773,537
Whale oils		502,575	17,389,741	73,186,705
Total		8,983,454	66,138,350	180,364,315
1938				
Cod and cod-liver oils		204,359	4,904,788	23,234,770
Other fish oils	2/	2,586,108	22,739,631	56,329,990
Whale oils		555,375	19,911,242	81,062,996
Total		3,345,842	47,555,661	160,627,756

1/ Includes herring and sardine oils, 2,836,200 pounds; menhaden oil, 4,482,000 pounds; and other fish oils, 837,158 pounds.

2/ Includes herring and sardine oils, 69,585 pounds; menhaden oil, 1,734,534 pounds; and miscellaneous fish oils, 781,989 pounds.

Marine-animal Oils Imported for Consumption

Oil	2nd Quarter 1939	2nd Quarter 1938
	Pounds	Pounds
Whale oil	754,103	3,190,380
Cod oil	3,929,228	6,427,207
Cod-liver oil	13,766,828	10,805,437
Other fish oil	190,785	133,898
Total	18,640,944	20,556,922

Note:-Oils "Entered for Warehouse" and not yet withdrawn are not included. During the 2nd quarter of 1939, exports of domestic fish oils amounted to 514,554 pounds as compared with 469,352 pounds during the same quarter in 1938.

FROZEN FISH TRADE

Domestic Cold-storage Holdings of Fishery Products Less than a Year ago

Cold-storage holdings of frozen fishery products totaled 59,985,000 pounds on July 15, 1939, an increase of 13,020,000 pounds as compared with holdings on the same date the previous month, but 6,731,000 pounds less than was held on July 15, 1938. Seven items accounted for over 50 percent of the stocks on hand July 15 of the current year. These were

halibut 8,810,000 pounds, whiting 5,661,000 pounds, haddock fillets 4,108,000 pounds, shrimp 4,097,000 pounds, rosefish fillets 3,026,000 pounds, squid 2,997,000 pounds, and croakers 2,885,000 pounds.

Increased holdings in the New England section accounted for the major portion of the increase in frozen stocks on July 15, 1939, as compared with those on the same date the previous month. Items showing marked increases in this area were cod, haddock, and rosefish fillets; and whiting. Other sections reporting a considerable increase in holdings were the South Atlantic and the Pacific Coast States. Increased holdings of croakers in the South Atlantic States and of halibut and salmon in the Pacific Coast States accounted for the major portion of the increases in these sections.

Holdings of frozen fish (exclusive of shellfish) totaled 51,079,000 pounds on July 15, 1939, a decrease of 9,288,000 pounds as compared with the same date last year. Reduced holdings of cod, haddock and pollock fillets, halibut, sea herring, mackerel, salmon, and whiting accounted for the major portion of the decline. Important items held in greater quantities than a year ago were croakers, blue pike, rosefish fillets, smelts, and whitefish.

Stocks of frozen shellfish totaled 8,907,000 pounds on July 15, 1939, as compared with 6,350,000 pounds on the same date last year. Increased holdings of shrimp and squid accounted for the increase in these holdings. Stocks of frozen scallops and spiny lobster tails were less than a year ago.

During the month ended with July 15, 1939, 22,771,000 pounds of fishery products were frozen, an increase of 2 percent as compared with the same month last year. The principal items frozen during the month were whiting 5,451,000 pounds, halibut 3,249,000 pounds, haddock fillets 2,190,000 pounds, rosefish fillets 1,842,000 pounds, croakers 1,546,000 pounds, and cod fillets 1,306,000 pounds. Important items showing marked increases in freezings during the month ended July 15, 1939, as compared with the previous month were cod fillets, croakers, salmon, and whiting. Items frozen in smaller quantities were sea herring; pollock and rosefish fillets; shrimp; and squid.

Holdings of Haddock Fillets in Boston Show Large Increase

During July the holdings of haddock fillets in Boston cold-storage warehouses more than doubled. On the last Wednesday in July the holdings amounted to 3,076,000 pounds, an increase of 127 percent over the 1,354,000 pounds in storage on the last Wednesday in June. Compared with the total held a year ago, however, the July holdings were 24 percent less, 4,041,000 pounds being stored on the corresponding date in 1938. Items, in addition to haddock fillets, held in much lesser quantities than last year were mackerel, whiting, and rosefish and pollock fillets. Current holdings of squid were much higher than a year ago, 1,186,000 pounds being stored on July 26, an increase of 51 percent. The trend of the Boston holdings during July continued upward, warehouse stocks increasing approximately 50 percent over June. The total holdings, consisting of 30 classifications of sea food, amounted to 10,701,000 pounds on July 26. Compared with total holdings a year ago, this was a decrease of 37 percent.

New York Holdings Show Gain in July

Holdings of frozen fishery products at New York City on July 27 amounted to 6,636,000 pounds, an increase during the month of 474,000 pounds or 8 percent. Compared with 1938 figures, the current holdings were 6 percent less. While important gains were made during July in many of the 62 classifications of seafood stored, the largest increases in poundage were noted in whitefish and scallops. Whitefish holdings increased 146,000 pounds or 32 percent while the amount of scallops stored increased 104,000 pounds or 70 percent. The July 27 holdings of scallops, 252,000 pounds, were less than half of those a year ago as 621,000 pounds were held at that time on the corresponding date. Other species showing large increases over 1938 were sturgeon and squid. Sturgeon holdings amounted to 588,000 pounds, an increase of 97 percent. Squid holdings decreased 4 percent during July, yet, with 627,000 pounds stored, were 72 percent above those of a year ago.

The holdings of mackerel increased 11 percent during July, totaling 219,000 pounds. However, they were far below 1938 as last year at the end of July, 1,318,000 pounds of mackerel were in storage.

Blue Pike and Sauger Important Factors in Chicago Frozen Fish Trade

Approximately one-fourth of all Chicago cold-storage warehouse holdings of frozen fish and shellfish on July 27 consisted of one classification--blue pike and sauger. The total poundage for these species on that date was 1,138,000 pounds, a decrease of 177,000 pounds or 13 percent since June 29. Considerable decreases also occurred in the holdings of shrimp; rosefish and haddock fillets; and whiting, the general trend of most holdings during the month being downward. Classifications showing important increases during the month were lake herring and chubs, smelt, sea herring, and suckers. The total Chicago freezer holdings of fishery products on July 27, consisting of 43 classifications of seafoods, amounted to 4,886,000 pounds, of which 54 percent was fresh-water fish, 24 percent salt-water fish, 16 percent shellfish, and 6 percent unclassified.

Canadian Holdings of Frozen Fish Increase

Canadian holdings of fresh frozen fishery products amounted to approximately 22,500,000 pounds on July 1, 1939, according to information released by the Dominion Bureau of Statistics. This is an increase of 11 percent as compared with the same month last year and of 26 percent as compared with the holdings on June 1, 1939. The principal items held on July 1 of this year were halibut 4,950,000 pounds, sea herring 2,150,000 pounds, mackerel 2,050,000 pounds, whitefish 1,800,000 pounds, haddock fillets 1,700,000 pounds, cod fillets 1,550,000 pounds, and tullibees 1,200,000 pounds. Important items held in considerably greater quantities than a year ago were halibut, whitefish, and tullibees. The holdings of halibut and whitefish on July 1 of this year were each approximately 600,000 pounds greater than on the same date last year, while those of tullibees were approximately 800,000 pounds greater. Stocks of frozen mackerel on July 1 were approximately 500,000 pounds less than on the same date last year.

Holdings of frozen smoked fish in Canadian freezers on July 1, 1939, amounted to approximately 2,250,000 pounds, as compared with 2,120,000 pounds on the same date the previous month. The principal items held were cod fillets 1,150,000 pounds, finnan haddie 400,000 pounds, sea herring kippers 150,000 pounds, and haddock fillets 120,000 pounds.

In addition to the fresh frozen fish listed above, it is known that Canadian freezers on the Pacific Coast held considerable quantities of fish landed by United States fishermen. Data on these landings are not available.

Canadian cold-storage plants froze 6,900,000 pounds of fresh frozen fishery products during June 1939 as compared with 8,700,000 pounds in the same month last year. The principal items frozen during the past June were halibut 2,061,000 pounds, mackerel 1,867,000 pounds, haddock fillets 1,427,000 pounds, salmon 421,000 pounds, cod fillets 410,000 pounds, and sea herring 335,000 pounds. Canadian freezers also froze an additional 234,000 pounds of smoked fish. The two principal items were smoked cod fillets 183,000 pounds, and finnan haddie 40,000 pounds.

CANNED FISH TRADE

Alaska Salmon Pack

On July 29 the total Alaska salmon pack was reported to the Bureau of Fisheries as 2,807,000 cases of 48 one-pound cans, divided as follows: Western Alaska 1,196,000 cases, of which 95 percent was packed in Bristol Bay and 92 percent was red salmon; Central Alaska 1,139,000 cases, of which 50 percent was red salmon, 35 percent pink salmon, and 11 percent chum salmon; and Southeastern Alaska 472,000 cases, of which 56 percent was pink salmon, 23 percent red salmon, and 19 percent chum salmon. On the corresponding date in 1938 the

total Alaska pack was 3,586,000 cases. Although all varieties were packed in lesser quantities in 1939, 70 percent of the decrease of 779,000 cases was due to a smaller volume of red salmon.

British Columbia Salmon Pack

The British Columbia salmon pack amounted to 279,000 cases of 48 one-pound cans on July 29, according to figures released by the Chief Supervisor of Fisheries, Vancouver, B. C. Of the pack, 61 percent was red or sockeye salmon and 21 percent silver salmon. On the corresponding dates in 1938 and 1935 the total packs were 308,000 cases and 293,000 cases, respectively.

July Shrimp Pack Nominal

The Jacksonville Fishery Market News office reports that since the start of the new season on July 1 shrimp packing operations in the South Atlantic and Gulf States have been at a minimum. Three plants packing under the regulations of the Seafood Inspection Service of the U. S. Food and Drug Administration operated together only a total of 16 days during the period from July 1 to July 29, inclusive. The pack amounted to 2,633 standard cases, prepared from 157,157 pounds of raw shrimp. A "standard case" of shrimp represents the equivalent of 48 5-ounce cans for the dry pack and 48 5 3/4-ounce cans for the wet pack.

California Tuna Pack Continues Over Preceding Year

The monthly preliminary release of the Division of Fish and Game of the State of California shows that the pack of tuna for the first half of 1939 exceeded the pack for the same period last year by 47 percent. Of the 1,369,000 cases (48 one-half pound cans) produced through June 30, 1939, 941,000 cases or 69 percent were yellowfin tuna. Other varieties which made up the pack were, in order of volume canned, striped tuna; bluefin; albacore; bonito; tuna, tonno style; tuna flakes; and yellowtail. Canning operations were divided about equally between the San Pedro and San Diego districts.

California Mackerel Pack Under 1938

The 1939 mackerel pack up to June 30 amounted to 166,000 cases of one-pound cans, according to preliminary figures compiled by California's Division of Fish and Game. This volume marks a 20 percent decrease when compared with the 1938 pack of 209,000 cases. Ninety-four percent of the total 1939 pack was processed in the San Pedro district.

FOREIGN TRADE IN FISHERY PRODUCTS INCREASES

Imports of edible fishery products into the United States during June amounted to 24,632,000 pounds, an increase of 18 percent as compared with imports the same month last year. The principal items imported during June were salted groundfish 3,124,000 pounds, fresh and frozen lobsters 2,938,000 pounds, fresh and frozen fresh-water fish 2,665,000 pounds, and canned sardines 2,377,000 pounds.

During June, 4,906,000 pounds of edible fishery products were exported from the United States, an increase of 20 percent as compared with the same month in 1938. Two items accounted for 68 percent of the total exports during June--canned sardines 2,374,000 pounds, and canned salmon 966,000 pounds.

In the first six months of 1939 imports of edible fishery products into the United States amounted to 168,461,000 pounds, an increase of 20 percent as compared with the same period last year. The principal items imported during the current year were fresh and frozen fresh-water fish 26,132,000 pounds, salted groundfish 24,750,000 pounds, salted herring

18,250,000 pounds, and canned sardines 13,258,000 pounds. Important items showing marked increases in imports during the first six months of 1939 as compared with the same period last year were canned sardines which increased 54 percent, salted herring 32 percent, and salted groundfish 23 percent.

Exports of edible fishery products during the first six months of 1939 amounted to 58,341,000 pounds, an increase of 28 percent as compared with the same period last year. Shipments of canned sardines to foreign countries during the first half of the year totaled 24,137,000 pounds, an increase of 33 percent, while those of canned salmon amounted to 19,939,000 pounds, an increase of 41 percent.

FISHERY TRADE INDICATORS
(Expressed in Thousands of Pounds)

Item	Month	Latest month	Same month a year ago	Previous month
FRESH FISH LANDINGS				
Boston, Mass.	June	21,839	26,189	25,882
Gloucester, Mass.	do	8,999	6,167	8,662
Portland, Me.	do	1,753	1,356	3,663
Boston, Gloucester, and Portland:				
Cod	do	6,969	7,093	9,342
Haddock	do	9,319	9,726	13,539
Pollock	do	574	770	2,088
Rosefish	do	10,259	6,540	8,054
Pacific Coast:				
Halibut, North Pacific ports	do	10,049	9,383	8,844
Halibut, Seattle	do	3,855	3,668	3,291
FISH RECEIPTS, CHICAGO 1/				
Salt-water fish	do	797	(2)	1,065
Fresh-water fish	do	2,015	(2)	2,586
Shellfish, etc.	do	819	(2)	1,051
By truck	do	1,180	(2)	1,474
By express	do	1,467	(2)	2,008
By freight	do	986	(2)	1,159
COLD-STORAGE HOLDINGS 3/				
New York, N. Y.:				
Salt-water fish	July	3,083	4,252	2,834
Fresh-water fish	do	1,738	1,076	1,497
Shellfish, etc.	do	1,816	1,770	1,851
Boston, Mass.:				
Salt-water fish	do	9,098	15,804	5,552
Fresh-water fish	do	28	31	19
Shellfish, etc.	do	1,575	1,198	1,571
Chicago, Ill.:				
Salt-water fish	do	1,192	(2)	1,232
Fresh-water fish	do	2,635	(2)	2,669
Shellfish, etc.	do	783	(2)	873
Unclassified	do	276	(2)	287
United States:				
Haddock fillets	do	4,108	5,737	2,776
Halibut	do	8,810	9,738	5,940
Mackerel	do	1,858	5,570	1,556
Pollock fillets	do	373	1,891	635
Rosefish fillets	do	3,086	2,663	2,759
Salmon	do	2,293	2,485	1,688
Whitefish	do	1,330	1,237	1,443
Whiting	do	5,661	7,388	1,476
Shrimp	do	4,097	2,263	4,472
New England, all species	do	17,448	27,755	9,818
Middle Atlantic, all species	do	10,395	10,513	9,922
South Atlantic, all species	do	5,406	4,825	5,575
North Central East, all species	do	9,369	5,960	9,313
North Central West, all species	do	2,131	2,728	1,625
South Central, all species	do	1,285	1,175	1,359
Pacific, all species	do	13,982	13,755	10,645
FOREIGN FISHERY TRADE 4/				
Exports:				
All edible fishery commodities	June	4,906	4,104	5,078
Canned salmon	do	986	1,153	1,987
Canned sardines	do	2,374	1,198	2,767
Imports:				
All edible fishery commodities	do	24,632	20,854	26,479
Fresh-water fish and eels, fresh or frozen	do	2,645	2,609	2,299
Canned tuna	do	847	837	1,804
Canned sardines	do	2,377	1,484	2,801
Cod, haddock, hake, etc., pickled or salted	do	3,184	4,044	5,228
Herring, pickled or salted	do	507	355	2,960
Crab meat, sauce, and paste	do	793	816	711
Lobsters, not canned	do	2,938	2,743	3,059
Lobsters, canned	do	250	95	61

1/ Consists of direct receipts of dealers, brokers, and smokers.
2/ Data not available.
3/ Data for individual cities are as of the last Thursday of the month, except those at Boston which are for the last Wednesday of the month, and those for geographical areas and the total of the United States which are as of the 15th of the month.
4/ From data compiled by the Bureau of Foreign and Domestic Commerce.

Note.-Data for the latest month are subject to revision.

PRINCIPAL FIELD OFFICES AND LABORATORIES
OF THE U. S. BUREAU OF FISHERIES

Division of Fishery Industries

Boston, Mass.	B. E. Lindgren.....	253½ Northern Ave. Market News Service.....
Chicago, Ill.	E. C. Hinsdale.....	200 N. Jefferson St. Market News Service.....
College Park, Md.	J. M. Lemon.....	Horticultural Bldg., U. of Md. Fish. Tech. Laboratory....
Jacksonville, Fla.	S. C. Denham.....	309 Duval Bldg. Market News Service.....
New York, N. Y.	W. H. Dumont.....	33-A Fulton St. Market News Service.....
San Pedro, Calif.....	C. B. Tendick.....	Post Office Bldg. Fishery Statistics.....
Seattle, Wash.	V. J. Samson.....	421 Bell St. Terminal. Market News Service.....
Seattle, Wash.	R. W. Harrison.....	2725 Montlake Blvd. Fisheries Tech. Laboratory.....

Division of Fish Culture

LaCrosse, Wis.	C. F. Culler.....	Divisional Headquarters.....
Seattle, Wash.	F. J. Foster.....	2725 Montlake Blvd. Divisional Headquarters.....

Division of Scientific Inquiry

Ann Arbor, Mich.	Dr. John Van Oosten.....	University Museums. Great Lakes Fish. Investigations
Beaufort, N. C.	Dr. Herbert F. Prytherch...	Fisheries Biological Laboratory.....
Cambridge, Mass.	W. C. Herrington.....	Room A-210 Harvard Biol. Lab. N. At. Fish. Investigations
College Park, Md.	Robert A. Nesbit.....	Horticultural Bldg., U. of Md. Mid. & S. At. Fish. Invest.
Columbia, Mo.	Dr. M. M. Ellis.....	101 Willis Ave. Interior Waters Investigations.....
Milford, Conn.	Dr. Victor Loosanoff.....	New England Oyster Investigations.....
New Orleans. La.	M. J. Lindner.....	336 Chartres St. Gulf Shrimp Investigations.....
Pensacola, Fla.	Dr. A. E. Hopkins.....	Box 1456. Gulf Oyster Investigations.....
Seattle, Wash.	Dr. F. A. Davidson.....	2725 Montlake Blvd. Fisheries Biological Laboratory.
Stanford University, Calif.	O. E. Sette.....	Room 450-B Jordan Hall. Pilchard Investigations.....

Division of Alaska Fisheries

Cordova, Alaska.....	C. L. Olson.....	Alaska Fisheries Service....
Juneau, Alaska.....	J. Steele Culbertson..... S. H. Thompson.....	Federal Bldg. Alaska Fisheries Service.....
Ketchikan, Alaska.....	A. W. Hawkins.....	Alaska Fisheries Service....
Seattle, Wash.	H. J. Christoffers.....	706 Federal Bldg. Alaska Fisheries Service.....

A PLAN FOR THE DEVELOPMENT OF THE HAWAIIAN FISHERIES

Investigational Report No. 42

In view of the importance of the Territory of Hawaii to the United States because of its strategic location as our westernmost outpost, the assessment and proper development of its fishery resources assume much more than local importance. Efforts have been directed for many years toward making the Territory self-supporting even in the face of a national emergency that might cut off ready communication with the mainland. The possibility of achieving such a goal could be more readily determined if the extent of the aquatic food resources were more definitely known.

With a view to determining whether or not Federal assistance should be accorded in the conservation and development of Hawaii's fisheries, and, if so, in what ways and to what extent, Frank T. Bell, former commissioner of Fisheries, and Elmer Higgins, chief of the Division of Scientific Inquiry of the Bureau of Fisheries, visited the Territory during the summer of 1938. The results of their investigation are included in Fisheries Investigational Report No. 42 entitled "A Plan for the Development of the Hawaiian Fisheries".

Included among other recommendations made by these investigators are the following:

1. That a well organized program of fishery investigations directed toward a solution of the problems of conservation and development of the Hawaiian fisheries be established;

2. That biological investigations to determine the condition and trend of the fisheries to provide a basis for rehabilitation of depleted fisheries and for more complete exploitation of resources capable of fuller utilization be directed toward the offshore fisheries, the inshore fisheries, and the pond culture of food and bait fishes;

3. That an investigation of the technology and economics of the Hawaiian fisheries be conducted for the purpose of improving the methods of the fisheries and the means of utilization and distribution, and to assure gainful employment, a fair profit, and moderate cost to the consumer.

This report, which includes sections on the fishes of Hawaii, commercial fisheries, conservation of the Hawaiian fisheries, and a suggested fishery research program, may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., for 10 cents.